Vol. 49, pp. 11–14 March 9, 1936

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

NOTES ON FISHES IN THE ZOOLOGICAL MUSEUM OF STANFORD UNIVERSITY. IV. A NEW CATOSTOMID FROM MEXICO AND A NEW CALLIONYMID FROM CELEBES AND THE PHILIPPINES.

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The present paper continues the description of new and rare fishes in the Zoological Museum of Stanford University.[1]

Catostomus wigginsi Herre and Brock (1), new species.

Dorsal 12; anal 7; scales in lateral line 76 to 80; 2 or 3 on caudal base; in transverse series 14 above, 10 below lateral line; predorsal 42. Depth of the plump, rounded body is 4.2, head 3.35 to 3.4 times in length. Breadth of body equals depth of head, 5.4 to 5.5 in length, or 1.6 times in head; breadth of head 1.4 times in its own length; origin of dorsal midway between tip of snout and caudal base. Eye 5.2, snout 2 to 2.12, interorbital 3 to 2.85, least depth of caudal peduncle 3.1 to 3.4 times in head. Caudal little forked, lower lobe longest, 4.4 to 4.6 in length, 1.3 to 1.36 in head. Pectoral 5.5 to 6 times in length. Height of dorsal 1.88, length of its base 2.12 to 2.25 in head. Height of anal 1.5 to 1.6, length of its base 3.4 in head. The greatest depth is midway between opercle and dorsal origin; snout longer than postorbital; dorsal profile markedly convex. Upper lip with 5 rows of papillae, the broad lower lip with 6 or 7 rows. Anteriorly the scales are smaller, those on breast smallest.

Color in alcohol dusky gray above, with brown longitudinal lines on the back and sides; predorsal region rather uniformly dusky. Lower sides and under parts yellowish gray with a silvery lustre. Two black spots size of pupil on side, one above pectoral, the other above ventral. Fins

[1]For previous papers of this series, see Notes on Fishes in the Zoological Museum of Stanford University.

I. The Fishes of the Herre Philippine Expedition of 1931. Published by the author March 10, 1934.

II. Two New Genera and Species of Squalioid Sharks and a new Alepocephalid from Japan. COPEIA, September, 1935.

III. New Genera and Species of Gobies and Blennies and a new Myxus from the Pelew Islands and Celebes. Philippine Journal of Science. *In press.*

colorless. Head, body, and fins sprinkled with black dots, the cysts of some protozoan which has heavily parasitized the specimens.

Described from the type, 114 mm., and paratype 117 mm. in length, both in the Zoological Museum of Stanford University. They were taken from a pool about 3 feet wide, 15 feet long, and not over eighteen inches deep, in the west fork of the Rio San Miguel, 5 miles northwest of Cucurpe, and 29 miles southeast of Magdalena, Sonora, Mexico. According to the Mexicans, seepage keeps this pool filled the year around. Above and below it the stream bed was dry on September 12, 1934. This is over 150 miles from the coast, at an elevation of 2,580 feet.

From other Catostomids in northern Mexico this species differs in its much larger head. *C. bernardini* also has the dorsal base 1.33 in the head, in contrast with over 2 in *C. wigginsi.*

We take pleasure in naming the species for Dr. Ira L. Wiggins, botanist of Stanford University, who collected this and other rare Mexican fishes for Stanford Museum.

Mr. Vernon E. Brock, of Stanford University, has collaborated in the description.

BRACHYCALLIONYMUS Herre and Myers (2), new genus.

Body very short and heavy; head large, very broad, somewhat depressed. The snout very short and broadly rounded when viewed from above; pointed when viewed from the side. Origin of first dorsal at middle of standard length. Eyes widely separated, at least one orbit diameter apart. Pelvic fins 1–5, far apart, the outer borders not attached to the skin in front of the pectoral base as in *Synchiropus.* Gill opening small, latero-superior; opercle prolonged backward beyond pectoral base in a long, narrow, blunt-tipped projection. Mouth wide, evenly curved, transverse, with little lateral gape, its width about equal to distance from pupil to pupil; lower jaw very slightly inferior. Preopercle armed with a single long, straight, heavy spine, projecting far upward and outward, with 2 or 3 strong retrorse spines along its inner margin, the distal one almost at the tip; length of each preopercular spine more than width of mouth. These spines, together with the short body and broad head and thorax, give this little fish much of the appearance of the Californian cottoid fish, *Enophrys bison.* Lateral line conspicuous; first dorsal III. This genus differs widely from all other known *Callionymidae* in its extremely short, heavy body and the posterior position of the dorsal fins.

Genotype the following new species.

Brachycallionymus mirus Herre, new species.

Dorsal III—9; anal 9. Depth 3 to 3.25, head 1.6 to 1.7, breadth of head 2 to 2.1, caudal 3 to 3.2, pectoral 2.77 to 3.2, ventral 2.66 to 2.77 times in the standard length. Eye 4.5 to 5, snout 4.1 to 4.2, interorbital 4.4 to 4.55, preopercular spine 2.5 to 2.6, first dorsal 4 to 4.2, second dorsal 3.3 to 3.5, anal 3.3 to 3.75 times in head. Snout broadly rounded; mouth width 3.25 in head. The preopercular spines project upward and outward

continuously with the curve of the snout, their tips far apart, the distance between tips 1.25 in standard length. The gill opening is an elongate, more or less vertical slit at the side of the nape, in the curve of the skin connecting opercular flap with head. The other characters are indicated in the generic diagnosis.

Color in alcohol pale brown with 5 or 6 broad, darker brown cross bands, the first two before the first dorsal, the third under the first dorsal, the others narrower and below the second dorsal; ventrals velvety dusky brown above; other fins colorless.

The type, 18 mm. standard length, collected on the north coast of Celebes, is in the Stanford Museum. When I brought this specimen to the U. S. National Museum for comparison, Dr. G. S. Myers called my attention to three others collected in the Philippines by the U. S. S. *Albatross*. These specimens, U. S. N. M. 98,827, two each 16 mm. long, from Romblon, and U. S. N. M. 98,828, one, 15 mm. long, from Nasugbu, Batangas Province, are designated as paratypes.

Dr. G. S. Myers, of the U. S. National Museum, has collaborated in the generic allocation and description.